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AUTHOR Bernal, Ernest M.
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ABSTRACT

Several definitions of giftedness have been used to identify culturally different gifted children. Traditional notions of giftedness have focused on high degrees of intellectual ability, special talent, or innate ability in a particular area. A more liberal definition would include any children identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. Culture-based definitions of giftedness account for a diversity of patterns of intellectual ability and culturally unique learning styles. Likewise, a variety of approaches have been used to identify gifted students. These include group and individually administered intelligence tests, aptitude tests, and achievement tests; culture-based tests of cognitive ability; tests of creativity; various types of nominations and related techniques; checklists and behavioral inventories; interviews, self-reports, and case histories; examination of a student's products; Piagetian tests; and language proficiency tests. These approaches are discussed in terms of their inherent advantages and disadvantages and their utility for identifying minority students. (Author/GK)

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ERIC REPORT 72

METHODS OF IDENTIFYING GIFTED MINORITY STUDENTS

by Ernest M. Bernal

ERIC CLEARINGHOUSE ON TESTS, MEASUREMENT, & EVALUATION
EDUCATIONAL TESTING SERVICE, PRINCETON, NEW JERSEY 08541

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ERIC Clearinghouse on Tests, Measurement, and Evaluation
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Princeton, NJ 08541

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by Ernest M. Bernal
Creative Educational Enterprises, Inc.

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Introduction

This paper deals not only with the methods of identifying gifted students from nondominant ethnic populations, but also with the issues and changes these practices augur for the definition of giftedness itself and for the identification and selection of students for gifted programs. Needless to say, the prospect of admitting substantial numbers of minority persons—particularly those with characteristics or patterns of abilities not previously recognized as indicative of giftedness—into either new or established educational programs for the gifted gives rise to the prospect of curricular reconceptualization or at least modification (Bernal, 1979).

Throughout American history certain members of nondominant ethnic populations have achieved eminence, receiving the plaudits of this nation's highest tribunals and awards from this nation's highest offices. American educators point with pride to these exemplary persons, particularly those educated in the public schools, and their desire to establish them as role models for the current generations of minority students is evidenced by the naming of minority neighborhood schools in their honor and by the proliferation of their pictures and biographical sketches displayed in special classes for the disadvantaged.

What these American educators do not realize is that these minority exemplars probably represent the survivors among what Feldman (1979) and others have referred to as the extremely gifted, whose personalities, abilities, and accomplishments made them virtually impossible to ignore, especially as adults. Too few were identified while they were still children. And one can only speculate about the maceration of human talent among minority groups (Renzulli, 1973) that cannot be rationalized historically with an occasional "find." Many of these gifted persons, furthermore, were wooed away from their ethnic ties (Gallagher & Kinney, 1974), thereby reducing their effective contributions to the betterment of their own people. Not all of them "came back" (Bernal, 1973a), and the deracination of the best and the

brightest minority students continues to be an issue (Bernal & Reyna, 1975). There are some parallels between the education of minority gifted in general and the education of gifted females (see Callahan, 1979): there are very subtle—sometimes unconscious—mechanisms for "teaching people their place" in school, for ignoring, co opting, and discouraging talent that introduces a discontinuity with stereotypes or values (Cole & Bruner, 1971) or that portends change or accommodation on the part of the school or program.

The result has been, of course, that minority children are generally underrepresented or not represented at all in programs for the gifted (Bernal & Reyna, 1975). Furthermore, traditional (namely, IQ-test-based) procedures for selecting students for participation in these programs have been largely responsible for this exclusion (Bernal, 1974, 1977), as will be examined later on in this paper. Nor can we ignore the fact that in some communities, gifted programs are the last bastion of segregation in the public schools.

Minority Gifted Students: A Paradox?

Sato (1974) has defined the culturally different gifted child as a member of a culture other than the dominant culture who shows potential for outstanding achievement in any area of human endeavor. This definition relates minority gifted to current definitions of gifted (e.g., Marland, 1971) but does not make clear that to be culturally different means to be behaviorally different in group-identifiable ways (Bernal, 1976). And therein lies the problem for many educators.

For many, the words "gifted" and "minority" are only queerly juxtaposed. Other phrases make sense, as it were, and include "minority disadvantaged," "limited English proficient" (LEP), "culturally disadvantaged," "culturally deprived," and "minority underachievers" (Fitz-Gibbon, 1975). In short, our recent educational history with minority populations has emphasized their deficits, and educational programs have incorporated compensatory approaches, which seek to make the culturally different more like the "mainstream American student" (Cole & Bruner, 1971) through head-on corrective teaching. Baratz and Baratz (1970) critique that deficit model as being based on the following assumptions:

1. that upon entering school, the disadvantaged child is unable to learn in the educational environment;
2. that this inability to learn is due to inadequate socialization;

3. that the ghetto environment does not provide adequate sensory stimulation for cognitive growth.

In a professional ambience where minority students are effectively regarded as interchangeable units, it is difficult to speak of those who are gifted (Bernal, 1973b). Indeed, after generations of having been demeaned by the schools (Cárdenas & Cárdenas, 1973; Bernal, 1974a), it is difficult for many minority parents to think of their bright children as gifted. At the individual level, many manifestly gifted minority adults balk at the use of "gifted" or any of its equivalent synonyms to describe their works or accomplishments (Bernal, 1974b). They discount the compliment not out of personal shyness or social manner, but because it is not part of their self-concept or self-conscious repertoire; they feel that "really" gifted people are somehow different from themselves, and in this they generally reflect school-based notions or stereotypes of giftedness. Little wonder that so many educators of the gifted recommend intensified counseling efforts for the gifted and their parents (Dirks, 1979; Gowan, 1968; Hitchfield, 1976; Impellizzeri, Farrell, & Melville, 1976; Kranz, 1975, Lyon, 1971, 1974; Passow, 1972; Sanborn, 1979; Stalnaker, 1969; Torrance, 1962; Whitmore, 1978; Witty, 1978).

So while the educational philosophy of the United States may recognize culturally different gifted, educational practice has some tacit traditions to undo. It must seek to better understand minority gifted children (Rivlin, 1978) and grant them their pluralism, and, in so doing, perhaps come closer to the core definition of giftedness, a definition that is simultaneously less bound to the cognitive preferences of the dominant ethnic group (Bernal, 1973a) and of greater validity and operational utility for the identification and selection of all gifted children for appropriate educational programs. The outlook is bright: Gifted education is likely to be the one field where its most notable spokespersons—practitioners and researchers—have evidenced concern for minority students in ways that would build upon their assets.

Traditional Notions of Giftedness: How Well Do They Serve Identification?

One reason that minorities have not been selected more often for participation in gifted programs is intimately bound up with the failure to identify all gifted pupils—whatever their ethnicity—in the first place. The schools, however, are not entirely to blame, since the construct *giftedness* has not been defined clearly, and its operationalization has

often caused many—if not most—of the gifted to be overlooked.

It seems that giftedness and talent are distinguished arbitrarily. The *Dictionary of Behavioral Science* (Wolman, 1973) defines *gifted* as possessing a high degree of intellectual ability or special talent, while *talented* denotes a high level of innate ability in a particular area. English and English (1958) describe *talent* as a high degree of ability or aptitude and hold *gifted* and *endowment* to be popular terms for high ability, largely innate. They also point out that the notion of a gift as something passively received leads one to infer that giftedness is inherited, but that technical usage need not rest on such an assumption. The *Dictionary of Education* (Good, 1973) speaks about the extremely gifted, first-order gifted, and second-order gifted, depending on potential and percentage of the population.

The result, if one may judge by the casual remarks of classroom teachers and administrators during introductory inservice training on the gifted, is that the gifted have a mystique about them—something mysterious, inscrutable, and prodigious—which does not help the cause of gifted education. There are problems with these traditional notions (Carroll & Laming, 1974), not the least of which is the tendency to stereotype or, worse yet, to dismiss the gifted as too few and too inherently competent to be of great concern to practical educators who must direct their efforts to more general and worthwhile objectives, such as getting their students to achieve "up to grade level." Then, too, many parents receive the news that their child is gifted with mixed emotions and are distressed if their child does not live up to their expectations for perfect scores in all school subjects (Dirks, 1979). It is not surprising, really, to discover that 57.5 percent of the school principals in a national survey (Plantec, 1971) reported having no gifted students (Marland, 1971).

Furthermore, these traditional notions of giftedness can be satisfactorily operationalized in only a few ways: by very high scores on IQ, special aptitude, or achievement tests. The higher the score, it would seem, the more accurate the prediction of giftedness. This leads to what Renzulli (1978) has called "restricted" definitions of giftedness, limiting the number of performance areas and specifying the degree or level that must be attained before a positive identification is made. As Radford (1973) commented, much of what is called identification is really selection.

Selection for participation in programs, then, is also restricted, and some schools establish successive hurdles by using one measure (say, a group-administered IQ test) as a screening device and follow that with one or more measures (say, an individually administered IQ test and a review of achievement test scores) before a final determination is

made. This author's experience in the schools indicates that the greater the number of successive hurdles, the lower the percentage of minority pupils selected for the gifted program. Also, those minority students who are admitted through this process tend strongly to be the most acculturated (Bernal & Reyna, 1975; Mercer, 1976), thereby diminishing the cultural heterogeneity of the gifted program and stigmatizing it as "the Man's game" (Passow, 1972) in the eyes of other minority students (Bernal, 1976). Multiple criteria—or successive hurdles, depending upon one's perspective—can be set in a perfectly respectable manner, given the r otions of giftedness just reviewed, and only the most informed educators might consider challenging this practice.

When schools that establish these multiple criteria decide later to search out and include more minority students, the selection "standards" often have to be lowered. A kind of *Bakke*-related problem occurs, to the detriment of all minority students in the gifted program, even those who would have qualified under the old system, because a second-class citizenship (like "second-order gifted") is recognized. Gifted minority students become "the best of the worst." Baldwin (see Gallagher & Kinney, 1974) has eloquently expressed the frustration of a gifted minority educator:

> . . . about the arbitrary IQ 130 cut-off point. I hated the idea of having to lower the standard for this class because it simply put a "notch" in the belt of those who collect supportive data which point to deficiencies in an already maligned group. . . . Yet, if the acceptance scores were not lowered, exceptionally bright students . . . would be overlooked. . . .

Are minority students who are "exceptionally bright" the only ones who are overlooked through these practices? Evidently not. Restricted definitions of giftedness, when operationalized for selection, exclude many, if not most, of the gifted from participation, especially if one considers the selection process retrospectively. Renzulli (1978) indicates that

> More [numbers and percentages] creative and productive persons come from below the 95th percentile than above it, and if such cut-off scores are needed to determine entrance into special programs, we may be guilty of actually discriminating against persons who have the highest potential for high levels of accomplishment (p. 182).

Eisner (1963) points out that creativity is not a special gift possessed by a limited few. Torrance (1962) ventured that above an IQ of about 120, personality factors play a greater role in creative achievement than a higher IQ, and Stalnaker (1969) holds that IQ is overrated, regarded as infallible and crucially significant at the expense of other

characteristics that contribute to high attainment.

Having reviewed 46 studies dealing with traditional measures of college aptitude and postcollege achievements in the professions, Hoyt (1965) concludes that these indicators have no more than very modest correlations with various indicators of success in the adult world. Wallach (1976) finds that test scores in the higher ranges used for selecting persons for gifted programs do not necessarily reflect the potential for creative or productive achievement. He suggests that test scores be used to screen out persons in the lower ranges and that beyond this point, decisions be based on other indicators or superior performance.

Thus traditional, restricted notions of giftedness have led to restrictive and highly inaccurate procedures for identifying and selecting students for gifted programs. These procedures, especially when heaped on one another, have positively identified and selected too few of the gifted and yielded too many "false negatives": children who, indeed, are gifted but whose potentials go unrecognized and uncultivated by the schools. A more comprehensive definition and operationalization of giftedness would lead us to identify more of the gifted children, including those who come from nondominant ethnic populations.

Current Definitions of Giftedness: How Useful Are They for Identification and Selection?

"Gifted and talented children are those, identified by professionally qualified persons, who, by virtue of outstanding abilities, are capable of high performance." So reads the once U.S. Office of Education's (USOE) definition of gifted and talented children. It goes on to say that these abilities, either potential or manifest, include general intellectual abilities, specific academic aptitudes, creative or productive thinking, leadership, ability in visual and performing arts, and psychomotor ability (Martinson, 1974). Under Public Law 95- , the current definition used by the U.S. Department of Education has dispensed with "psychomotor ability."*

This definition would be considered "liberal" by Renzulli (1978), in contrast to the restricted definitions discussed earlier, since it recognizes many varieties and expressions of the trait (Rabenzer, 1979), including the intellectual qualities and behavioral strategies of minori-

*Karnes and Collins (1978) indicate that 24 states use the old USOE definition, two states use the new definition (omit the psychomotor component), and that eight states have no definition of gifted whatsoever.

ties, previously ignored (Bruch, 1971). According to Sanborn (1979), the broader definition of giftedness

> is designed, in part, to encourage those who identify the gifted to include factors that are not as culturally biased as are measures of intelligence. . . . Hence, we may expect to find wider variations among present groups of gifted youngsters than were found in the past (pp. 426-427).

This expanded definition is also harder to operationalize and introduces the spectre of subjectivity (Renzulli, 1978). Whereas the older definitions could be readily translated into identification and selection techniques via the "unchangeable" IQ (Fortna & Boston, 1976) and any of several specific aptitude or achievement tests, which were all familiar to educators and the public, the expanded definition, while it retains these techniques, also introduces less-standardized alternative methods, such as expert judgment, sociometry, observation, and self-reports.

From a political perspective, these latter methods do not have the "prestige" of IQ tests and are thereby harder to "sell" to school policy-makers, administrators, and teachers. Their value lies in their potential for identifying a greater number of gifted children (Gresson & Carter, 1977). That schools may have to experiment with these techniques in order to select or develop the ones with good validity is really no excuse not to use them, for the standardized tests, as discussed previously, are not, in fact, much better in terms of accuracy and they, themselves, have to be subjected to empirical scrutiny by test users in gifted programs.

There is, however, a major issue that needs to be discussed more fully (Bernal, 1976): the greater variability in characteristics of students eligible for gifted programs, which this expanded definition will undoubtedly bring about, may necessitate changes in a school district's gifted program. The traditional selection methods tended to bring students together who were relatively homogeneous by sex, ethnicity, and achievement, depending upon how many successive multiple criteria were used. The injection of greater numbers of females, minorities, and persons of specialized talents will not only introduce new skills (such as bilingualism) but also a greater variety in profiles of abilities, interests, and values in the student group. A program that emphasizes studying/learning (such as a simple acceleration program) to the exclusion of doing/producing/creating will doom either itself or its students—at least those who are not bookworms. The schools can look upon the new gifted as a problem that causes change and accommodation and a lowering of standards, or as an opportunity to educate the best and the brightest from every group in a way that

builds on their diversities and pluralism (Torrance, 1973), even to the extent of having them learn from one another (Bernal, 1976).

Guilford's Structure of Intellect (SI) model (see, for example, Guilford, 1972) has contributed in no small way to this expanded definition by raising the consciousness of educators to the fact that many factors (120 possible) are involved in "intelligence." His signal work brought into focus "divergent production" and creativity (Guilford, 1964), illuminated the role of transfer of learning in the creative process, and opened new vistas for curricular objectives and teaching methods.

In addition, the SI model and Guilford's subsequent research in devising tests for these factors gave rise both to the development of new tests and to SI analyses of extant IQ instruments for the purpose of better identifying the gifted (Meeker, 1969). Predictably, these developments were also applied to the identification of minority gifted (Bruch, 1970; Meeker, 1978) and to the discovery of their special intellectual strengths (Torrance, Gowan, Wu, & Aliotti, 1970; Bruch, 1972). As Torrance (1973) puts it:

> It was not until I started working with disadvantaged Black children . . . that I began to see how important it is that we stop trying to identify a universally gifted type child and begin looking for those kinds of giftedness that are valued by the particular subculture in which a child has been reared.

Renzulli (1978) has recently synthesized much of the research, which has been fragmented for years. He holds that the ingredients of giftedness include above-average ability, task commitment, and creativity, and that giftedness lies in the intersection of these factors. This tripartite model can be seen to explain dynamically many of the perplexing phenomena associated with superior abilities. It permits one to explain, for example, why persons can set aside their giftedness temporarily while retaining a nimble wit, why there is a certain intensity to the creative process, why there are "late bloomers" and "morning glories" (Passow, 1972), why there are high-ability underachievers (Bachtold, 1969; Goldberg, 1960), why personality factors and work attitudes are crucially important in outstanding achievement (Lyon, 1974; Taft & Gilchrist, 1970; Torrance, 1962), and why gifted children cannot be left to fend for themselves in school under the assumption that giftedness will surmount all obstacles or manifest itself spontaneously (the so-called "cannonball theory"). This model can probably be elaborated to yield evaluative criteria for different aspects of gifted programs and better-balanced behavioral identifiers of potentially and manifestly gifted students.

Focusing again on the area of ability, another researcher has impacted this broader definition of giftedness, a person not directly involved with studying or educating the gifted at all—Jean Piaget. An epistemologist, Piaget studied how children know the world and how these different ways of knowing will change as children mature intellectually. His fundamental findings have strongly influenced early childhood education and have reintroduced "the black box" of ideational processes into psychology. His theory is based on the existence of four invariant stages of cognitive maturation: the sensorimotor period, preoperational thought, concrete operations, and, finally, the stage of formal operations. These stages represent essentially qualitatively different ways of organizing knowing and perceiving, and each stage can be linked psychometrically to certain types of tasks that reveal the child's organization of reality. It is very important to note that his findings seem to hold cross-culturally (Bernal, 1974; De Avila & Havassy, 1974b).

In a paper presented in 1966, Schermann (1966) speculated that for "young children, one form of giftedness may be an early entry into the stage of concrete operations . . . or, for that matter, an older child who moves early into formal operations." Because gifted children seem to benefit from instruction using content and materials requiring higher levels of reasoning, Bernal (1974) included Piagetian-type tests in his study of gifted Chicano children, and a further small-sample study (Bernal & De Avila, 1976) found that Piagetian test scores are moderately correlated to mental age and that gifted children can be distinguished from their average counterparts through the use of such tests.

Today, it is recognized that "brightness as measured by psychometric testing implies developmental precocity in reasoning" (Keating, 1976), that gifted children indeed score higher on Piagetian tasks (Roeper, 1977), and even that some children evidence these higher processes only in certain domains (Feldman, 1979).

Thus, Piagetian tests might be considered as useful alternatives to IQ testing for children in general since these techniques can be cast into another language or dialect, seem to be significantly less biased culturally (Bernal, 1973), and, in at least one of their commercially available forms, can be linked to prescriptive teaching (De Avila & Havassy, 1975). What has not yet been researched satisfactorily is whether minority children who score equally high in Piagetian tasks but do not have the same IQ scores as white students are also gifted. Bernal and Reyna (1975) and Bernal and De Avila (1976) argue that comparable high performance on Piagetian measures should suffice for such identification.

While bilinguals and children who do not speak English can be tested fairly validly with Piagetian tests, there is at least some evidence in the very recent past that measures of language proficiency may be used to identify high-ability children. During the last 15 to 20 years, considerable research has accumulated to indicate that persons who acquire considerable proficiency in two or more languages either have great ability or develop it (see, for example, Lambert & Tucker, 1972). In an excellent review of this literature, Cummins (1979) argues for a "developmental interdependence" of language skills in which competence in the second language is partly a function of competence in the first, and concludes that one form of bilingualism, "additive bilingualism," seems to produce high cognitive effects, including cognitive flexibility and high transfer of learning, phenomena which are associated (Guilford, 1964; Torrance, 1962) with creativity and general problem-solving skills.

Recently Duncan and De Avila (1979) have shown that high proficiency levels in English and Spanish are associated with differences in cognitive style and higher performance levels on the Cartoon Conservation Scales, a "neo-Piagetian" measure of cognitive development. The authors suggest possible giftedness for those children who score at the top of the English and Spanish proficiency categories.

A follow-up study of children identified with creativity, Piagetian, and linguistic methods and selected for different types of gifted programs is necessary and should include their later performance on traditional measures and a study of their real-life accomplishments. Indeed, such a study would be appropriate for the whole of gifted education, since it has never been done. Even Terman's epic longitudinal studies were not directly linked to differential program effects.

Using Culture-Based Definitions of Giftedness for Identification and Selection

The importance of recognizing cultural indicators of giftedness for minority children stems from the recognition that traditional methods of identification and selection have overlooked too many of the gifted, including a disproportionately large number of minority gifted, and a realization that no single culture can adequately reinforce and develop to a great degree all the diverse cognitive processes possible in, say, the Structure of Intellect (Bernal, 1974).

Lesser, Fifer and Clark (1965) found that members of different ethnic groups exhibit different patterns of intellectual ability and "culturally unique learning styles." Kleinfeld (1973) and others have shown how some culturally different groups outperform U.S. whites on cer-

tain cognitive abilities. And Cazden (1968) indicates that ethnic background and social class have different effects: ethnic background affects the *pattern* of mental abilities, while social class affects the *level* of scores across the mental ability scales.

These and many related studies influenced some researchers in the field of giftedness to seek to identify the cognitive strengths of particular minority groups through the use of tests (Bruch, 1971; Meeker, 1978; Torrance, 1973). But most important to minority students in gifted education has been the realization that giftedness is in no small part a relationship between culture and consciousness (Orange, 1977), influenced by language and world view, by conceptual style and values, and that every cultural group can and has recognized its most capable members (Bernal & Reyna, 1975; Freehill, 1975).

The assumption underlying the expanded notions of giftedness, and the effort to identify culturally/behaviorally different gifted children in particular, seems to be that the best and the brightest of any and all cultural groups, irrespective of their differences in cognitive profiles, can benefit from special programming because they will have much more in common than not. This assumption may be borne out only under conditions where the curriculum is made to be appealing and responsive (Passow, 1972) to both the needs and the strengths of all the groups involved (Bernal, 1976), with the understanding that the culturally different should "not be reformed to fit some previous model of competence, but . . . be confirmed and encouraged in many of their natural strengths" (Grossman & Torrance, 1970). Patronizing, deficit-model approaches to the education of minority gifted are not contemplated here, for *everyone* should benefit from their inclusion. The ingredients of giftedness (Renzulli, 1978) across cultural groups are not different, but their manifestations may be.

If traditional identification techniques have discriminated against minorities, it is precisely because they were based on tests designed to measure the maximum performance of persons from a different culture, the culture of the dominant ethnic group. A similar emphasis is now being "placed on recognizing the gifted and talented in the context of their own culture using the knowledge and understanding of that culture as [the] background for [identification]. . ." (Kaplan, 1974, p. 79). As Torrance (1978) states:

> If educators are really interested in identifying gifted and talented students in minority groups, they will direct their searches to those characteristics that are valued by the particular minority groups (pp. 29-30).

So while the general utility of tests cannot be denied (Stanley, 1976), their use as the sole determiners for either identification or selection

cannot be condoned (González, 1974), since this would require one to overlook their shortcomings (De Avila & Havassy, 1974a) or to deny their dubious appropriateness for culturally different learners (Bernal, 1975).

The criticisms of standardized testing, it seems to this author, stem not so much from their short-term predictive validity as from their longer-term predictive validity, diagnostic utility (another aspect of predictive or criterion-related validity), content validity (Khatena, 1977; Stallings, 1972), and appropriateness (Bernal, 1977; Hillard, 1976). Such testing is, after all, "the Man's game," and many minority children are unmotivated or intimidated by the experience, for the very testing ambience itself (for example, in a closed room alone with an adult asking questions in standard English) is not conducive to obtaining many minority students' best performance.

The solutions implied earlier are to find more valid, more widely applicable alternatives to these tests, including the development of better tests, the selection of tests that measure other facets of giftedness, and the design of nonpsychometric instruments to assess the behaviors or traits of interest. These will be discussed in the next section of this paper.

Methods of Identification and Selection

The different approaches to the identification and selection of the gifted will be discussed and critiqued from two perspectives: the inherent advantages and disadvantages of each and their utility for identifying minority students.

General criticisms of *group and individually administered IQ tests, aptitude tests, and achievement tests* appear elsewhere in this paper. Many group IQ tests do not have sufficient ceiling to measure the very high-scoring gifted, hence they are sometimes used only for initial screening. After taking many of these tests—especially the very short ones—students who are retested with individual IQ tests often achieve higher scores. Thus, using high cutoff scores on group tests is not recommended. Because of ceiling effects also, "out of level" testing—in this case, with more advanced tests, such as the administration of college admissions tests to young teenagers (Stanley, 1976)— is undertaken. Furthermore, for many minority children the factor structure of these tests is altered (see, e.g., Anastasi, 1976), especially when children lack experience in taking such tests (Anastasi, 1970). This is not surprising in the light of the different patterns of abilities that minorities tend to exhibit (Meeker, 1978).

Some well-intentioned but irrelevant ways have been used to "compensate" for the generally lower test performance of minority students. These include adding points, selecting only those subtests of an IQ test that children seem to understand, and ad hoc translations into English, but these techniques are neither respectable nor defensible psychometrically (Bernal, 1977; De Avila & Havassy, 1974a). Similarly some quota systems, through the use of which the top x-percent of all ethnic groups are selected for gifted programs, are used in order not to disturb the traditional testing-selection process, although, as mentioned earlier, this practice tends to stigmatize the minority students in the program while still failing to identify some of the more able among them.

Nevertheless, some minority children can be identified through these traditional means without mathematical manipulations of the scores, especially those who come from more advantaged economic circumstances. Also, Meeker (1969) and Bruch (1971) have modified the use of the Stanford-Binet IQ test to identify minority children with some success, and Mercer and Lewis (1978) have suggested ways of using the System of Multicultural Pluralistic Assessment (SOMPA), which incorporates the IQ test, for identifying gifted disadvantaged pupils. Meeker's Structure of Intellect Learning Abilities Test (Meeker, 1978), although somewhat "clinical" in nature (see Bruch, 1971), presumably yields ethnically equitable results.

Related to the above tests is the attempt to devise *alternate, culture-based tests of cognitive ability*. The "Who" and the "O": Contextually Situated Vehicles for the Assessment of Student Potential (see Hillard, 1976) is a test that appeals to the "synthetic-personal" style of Blacks. Instead of asking "Do you know what I know?" the test is more oriented to "What do you know?" Similarly, the California Environmentally Based Screen (CEBS) (Stallings, 1972, 1976, 1979) is designed to help neighborhood school personnel assemble pictorial stimuli and formulate questions using content from the immediate locale to assess the geographically isolated or ghetto student's knowlege of environmentally "familiar" or appropriate information, depth of recall, and abstract thought. CEBS is individually administered and scored in a standardized way, but the content pictures will vary with the locale. Scores obtained parochially, furthermore, cannot be compared with scores obtained anywhere else.

Technical data by which to evaluate these techniques, including the adequacy of their possible variations, is as yet insufficient, but it is clear that these authors are continuing to refine these procedures. Their merit would seem to lie in their precipitating extensive interaction between concerned professional educators and minority children

who might not otherwise have a chance to display their abilities. These techniques, then, are essentially combinations of standardized and clinical assessments and may work well when used in combination with other techniques, such as nominations, and to supplement the results of other tests (Stallings, 1979).

Tests of creativity are perhaps best exemplified by the Torrance Tests of Creative Thinking (Torrance, 1974). Some of Torrance's tests have been translated into Spanish (Torrance, 1966a, 1966b). Measures of this type generally require a student to name unusual uses of common objects, devise unusual titles for story lines, elaborate simple designs (such as parallel lines) into more detailed drawings, explain unusual verbal associations, or determine the consequences of highly improbable or fantastic events. Scoring techniques provide good illustrations of acceptable responses, although some measure of judgment or subjectivity is possible.

> Although some validation studies have reported limited relationships between measures of divergent thinking and creating performance criteria, the research evidence for the predictive validity of such tests has been limited. Unfortunately, very few tests have been validated against real-life criteria of creative accomplishments, and in cases where such studies have been conducted the creativity tests have done poorly. (Renzulli, 1978, p. 184).

Thus the state of the art has not appreciably improved since Yamamoto's (1966) review, which found technical problems with creativity tests in all three major facets of validity: content, criterion-related, and construct.

While these comments do not seem to recommend tests of creativity, further reflection would suggest that such tests probably fare almost as well as IQ tests. Renzulli (1973) recommended the use of the Torrance tests for identifying creatively gifted minority children, especially since these are not biased against the culturally different (Torrance, 1978).

Various types of *nominations and related techniques* have been used with some success, especially when they involve informants from the student's family and ethnic group (Gay, 1978). Nominations usually involve teachers, parents (Ford, 1980), peers, and community sources (from community agencies or private individuals) singly or in combination, and may or may not involve training or the use of structured reporting/rating forms. Spontaneous nominations or referrals, in this author's experience, are rare among the economically disadvantaged. Their number and accuracy can, however, be cultivated through outreach efforts and training, particularly when a certain person in the

school assumes a liaison role and becomes known for taking such information seriously by following through and providing feedback to the originator of the contact. Parental groups organized to foster gifted education can also help in generating more and better contacts and in the follow-up process.

Sociometric techniques also seem to work well once they have been debugged locally. Older children and adolescents are able to identify their intelligent peers. For children in the primary grades, the problem is to cause them to focus on the truly intelligent and not just on teachers' pets and personal friends. The stimulus questions in, say, a Guess Who technique have to develop a mind set that goes beyond the pleasantries, and more classic sociometric questions should have real consequences for the students who answer them by choosing from among their classmates. By varying these items, one should be able to develop sociometric tables for every major gifted trait and summarize in graphic form a group's consensual nomination of the best learner, the most inventive/creative/imaginative person, the one(s) with the strongest leadership or influence, and the best actors, musicians, or artists.

Solicited nominations usually lack validity and reliability (Baldwin, 1964). Nominations can, however, be considerably improved by training in what to look for (Sanborn, Pulvino, & Wunderlin, 1971; Martinson, 1974) and by incorporating the use of structured *checklists* or somewhat more formal *behavioral inventories* as part of the nomination-identification process. Usually these checklists and inventories ask one to compare or rate the person in question according to general descriptions or more specific examples of behavior, these being deduced from characteristics of gifted persons. Many of these instruments are designed locally, while others are available in commercial form or for the cost of postage or xeroxing from researchers in the field or publications that give blanket copying privileges. Some state departments of education and the Educational Resources Information Center (ERIC) also make some of these instruments available at low or no cost.

One of the more popular ones is the Scale for Rating Behavioral Characteristics of Superior Students (Renzulli, Hartman, & Callahan, 1971; Renzulli, Smith, Wirtz, Callahan, & Hartman, n.d.). This instrument requires the respondent to rate the applicability of each behavioral indicator to the person being rated; the scorer has to weight each of these ratings to generate subscores for each area of giftedness and a total score. Likewise, the G.I.F.T.S. Identification Instrument (Male & Perrone, 1979) rates students in six areas. Then, too, there are

scales designed specifically with the minority student in mind. These include the Relevant Aspects of Potential (RAP) (see Renzulli, 1973), the Baldwin Identification Matrix (BIM) (see Baldwin, 1978), and the Multidimensional Screening Device (MDSD) (see Kranz, 1976). Baldwin explains that the BIM accommodates the expanded definition of giftedness, and Kranz, using the MDSD, is supposed to have identified more blacks and other minority children than ever before.

The empirical basis for weighting the items and subscales of these instruments is generally elusive, as are studies of their reliabilities and validities. Face validity and usability are emphasized, and weights appear to be derived from the perspective that more is better or from a subjective estimate of the emphasis a trait has received in the literature. These individual traits are not viewed interactively and probably will not be until extensive and systematic research is conducted on their use both for general identification and for selection into specific program types; that is, programs whose curricular demand characteristics are known.

Another set of identification instruments and techniques includes *interviews, self-reports, autobiographies, and case histories.* These, of course, are predicated upon referral, nomination, or prescreening. Self-reports include such semistructured instruments as the Alpha Biographical Test (see Renzulli, 1973) and the Life Experience Inventory (DeYoung & Torrance, 1958). Interviews are often scheduled as part of the identification or selection process and are used to try to determine a candidate's general fitness for a program in addition to providing further evidence for classification and information for instructional planning. The efficacy of case studies for the identification of academically gifted students has been documented by Renzulli and Smith (1977) who find this technique superior to traditional measures, due ostensibly to the utilization of multiple sources of information, including records and multiple informants, which reveal a subject's history and establish her/his behavioral propensities in a variety of circumstances. The authors hold that the case-study approach also identifies minority students—a point supported by Gay (1978)—and is actually less costly than traditional identification procedures. Malone and Moonan (1975) have integrated the use of biographically derived indices and a diagnostic computer program, CHAROSEL, to identify minority primary school children.

Sometimes the case history and nomination approaches incorporate an *examination of a student's products or performances.* Teacher and content experts from the community can thus become involved. There is not, however, a literature on the subject dealing specifically with use

of expert judges to identify gifted students. This is a serious flaw in the identification process, for some gifted programs have been known to turn away students of exceptional accomplishment who did not meet the minimal IQ score. It would seem that in our desire to be "scientific" and "objective" in identifying and selecting students, we have confused our predictor variables with the criterion.

Actually, there are statistically sophisticated ways of enhancing the reliability and predictive validity of expert judgment, and these techniques need to be better articulated and validated for members of dominant and nondominant ethnic groups alike. A few schools—those dedicated to cultivating special talents or academic skills—use these techniques, at least informally. More commonly, secondary school programs in music use such judgment for selecting students for the premiere band. It appears, however, that by the time knowledgeable people review a gifted student's work, he or she has long since been identified and encouraged to undertake the project.

Piagetian tests can be found in various forms, from the classic and relatively cumbersome set of manipulables to cartoon representations of these problems. Many Piagetian "kits" are rather informally assembled and lack rigorous administration and interpretation standards. The Cartoon Conservation Scales (De Avila, 1977), by contrast, have been demonstrated to yield similar results on a number of cultural populations. Furthermore, these tests can be keyed to instructional content consistent with the child's level of performance and administered with considerably more efficiency than can the traditional Piagetian techniques because the latter were designed primarily for detailed and repetitive research purposes. Piagetian tests, in general, seem to have the potential of being cast into the language or dialect of any cultural group without encountering the usual problems associated with translation of test items, such as the significant alteration of item difficulties.

For bilingual students, as discussed earlier, evidence is mounting that the use of *language proficiency tests* may help uncover gifted or potentially gifted students. Language proficiency tests seek to establish functional levels of syntactic mastery in English and another language and are receiving widespread use in schools that must identify students who are limited English proficient (LEP) or of limited English-speaking ability (LESA) for state or federal programs or certain court-ordered desegregation compliance efforts. Unfortunately, many such tests lack systematic development and fail to report the usual psychometric properties (Bernal, 1977); furthermore, not all of the important languages are represented in the varieties of extant tests, and many are

devised locally to serve small reservation groups or pockets of minorities. Spanish tests predominate the area.

While it is not unusual for persons of average ability to learn a second language to a fair degree of competence, the *mastery* of two or more language systems is correlated with high performance in other cognitive abilities and processes (Duncan & De Avila, 1979) that are believed to be indicative of giftedness. More research using the better language-proficiency instruments needs to be undertaken, but it is clear that minority children who score high on two language scales, either initially or upon retesting after a period of second-language instruction, should be considered for further assessment, possibly using some of the other culturally unbiased techniques covered in this section. Elsewhere (Bernal, 1978), this author has recommended the Bilingual Syntax Measure (Burt, Dulay, & Hernandez, 1975), the Language Assessment Scales (see Duncan & De Avila, 1979), and the English and Spanish language production subtests of El Circo (see Bernal, 1977; Hardy, 1977) for use in gifted programs.

Summary and Conclusion: The Philosophy of Inclusion in Identification

Contrary to popular and some professional opinion, the state of the art in measurement does not seem to support the tacit position that traditional indicators of ability identify enough of the gifted students to warrant their exclusive use; nor, for that matter, does any one of the general indicators reviewed (Pegnato & Birch, 1959). Thus, the efforts of many schools to adopt straightforward and traditionally prestigious methods of testing to determine eligibility for gifted programs have caused most minority and many other gifted children to founder either on the Scylla of identification or on the Charybdis of selection. Compromise positions, such as the use of quota systems, while occasionally successful (see Lerose, 1978), risk demeaning minority students and still fail to identify those whose talents are unsatisfactorily tapped by these instruments. The use of a diverse system of identification is indicated (Robinson, Roedell & Jackson, 1979), since this increases diagnostic validity and is more likely to yield useful results, as in the identification of children with multiple talents (Rubenzer, 1979).

Perhaps an example would be useful. In a major joint effort, the Flint, Michigan, Community Schools and Educational Testing Service set out "to develop a selection model which would minimize the impact of biases of opportunity, of language, and of cultural satura-

tion, which mitigate against chances of selection among pupils from less advantaged environments" (Storlie, Bellis, & Powills, 1978). The program was more inclusive than exclusive, and did not use the "group parity" approach. Identification and selection were two distinct phases, and "documented exceptional achievement" was sufficient to satisfy identification.

This author (Bernal, 1974, 1976, 1978) has advocated inclusionism in identification. That is, if a child manifests giftedness *prima facie* or gifted potential on one or more indicators of the trait, the child should be identified as gifted and a candidate for selection. Of course, selection is an example of educational decision making in the practical realm, and, hence, must try to optimize the match between program and student characteristics. If it turns out that the gifted program contemplated or implemented by the school excludes some significant type of giftedness, then the results of the identification phase can serve as part of the needs assessment to plan the program's expansion. As more categories are included, so will more minority children be. This approach, the reader will note, circumvents the group parity issue while still providing for the design of programs to include minority students—all gifted students, in fact.

At this point we would be in a position to apply Witty's (1978) strategy for providing equal educational opportunity to gifted minority children: (1) early identification and selection, (2) careful programming to build upon minorities' intellectual strengths and appeal to their learning styles, (3) intelligent and caring teaching, (4) training of educators and parents in anticipation of both unrealistic notions of giftedness and "limiting expectations," and (5) providing parental support services and facilitating their contacts with school personnel. To these might be added the notion of periodic reassessment of students not previously selected. Such reviews need not be dramatic or costly, especially if one utilizes the data routinely collected by the schools (achievement test scores, grades) and is sensitive to "news" about children in and out of the school setting.

Gifted programs should, from the start, try to provide for as many categories of giftedness as possible. If resources limit the number of students who can be served by the program, then only the most gifted *in each of the categories* should be selected, else the program may devolve into a single-category program, and this will likely be a category that historically has limited the selection of females and minorities. Broadly defined gifted programs provide opportunities for students to explore wider interests, develop other abilities, and learn firsthand the interethnic respect and understanding necessary for intelligent participation in the American way of life.

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METHODS OF IDENTIFYING GIFTED MINORITY STUDENTS

by Ernest M. Bernal

Several definitions of giftedness have been used to identify culturally different gifted children. Traditional notions of giftedness have focused on high degrees of intellectual ability, special talent, or innate ability in a particular area. A more liberal definition would include any children identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. Culture-based definitions of giftedness account for a diversity of patterns of intellectual ability and culturally unique learning styles.

Likewise, a variety of approaches have been used to identify gifted students. These include group and individually administered intelligence tests, aptitude tests, and achievement tests; culture-based tests of cognitive ability; tests of creativity; various types of nominations and related techniques; checklists and behavioral inventories; interviews, self-reports, and case histories; examination of a student's products; Piagetian tests; and language proficiency tests. These approaches are discussed in terms of their inherent advantages and disadvantages and their utility for identifying minority students.

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